

## ALCHEMIX<sup>®</sup> EP 5751 / H15

**Very Low Viscosity, Epoxy Infusion/Laminating Resin System**  
**80 – 85 Shore D Hardness**

ALCHEMIX EP 5751 / H15 is a two part, ambient temperature cure, epoxy system, exhibiting outstanding mechanical and thermal properties. This system has remarkably low mixed viscosity and when cured shows good material properties. This system has excellent wetting properties for various fibre systems including glass fibre, aramid fibre and carbon fibre etc.

### Mix Ratio

**EP 5751 : H15**  
 By Weight                      100 : 27

### Product Data

Property	Units	EP 5751	H15	Mix
Material	-	Epoxy Resin	Formulated Polyamine	
Appearance	-	Clear Liquid	Clear Liquid	Clear Liquid
Viscosity (25°C)	mPa.s	600 – 900	10 – 20	250 – 500
Density (25°C)	g/cm <sup>3</sup>	1.10 – 1.20	1.05 – 1.15	1.10 – 1.20
Pot life (200g, 25°C)	Minutes	-	-	110 – 130
Cure Time (200g, 25°C)	Hours	-	-	24
Cure Time (200g, 100°C)	Hours	-	-	2
Cure Time (200g, 120°C)	Hours	-	-	1.5
Full Cure (25°C)	Days	-	-	7

# Technical Data Sheet



## Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS 2782: Part 3: Method 365B	Shore D	80 – 85
Density	BS 2782: Part3: Method 620	g/cm <sup>3</sup>	1.15
Tensile Strength	BS 2782: Part 3: Method 320A	MPa	60 – 70
Elongation at break	BS 2782: Part 3: Method 320A	%	5.0 – 7.0
Flexural Strength	BS 2782: Part 3: Method 335A	MPa	90 – 100
Flexural Modulus	BS 2782: Part 3: Method 335A	MPa	2400 – 2600
Heat Distortion Temperature (HDT)	TMA	°C	110°C

## Method of Use

Thoroughly mix the resin and the hardener according to the indicated mixing ratio, avoiding air entrapment and make certain that the material at the bottom and sides of the container is well stirred into the centre. When mixed can be used for laminating or infusion application within the pot life of the mixture. Cure the laminated or infused part at room temperature for 24 hours alternatively accelerated curing can be carried out as mentioned above. Post curing the part for 2 hours at 80°C, 2 hours at 100 °C and 2 hours at 120°C will increase the HDT significantly.

## Storage

ALCHEMIX EP 5751 and HARDENER H15 should be stored in original, unopened containers between 15 and 25°C.

If stored under the above conditions, ALCHEMIX EP 5751 / H15 will have a shelf life of 12 months, from the date of production.

## Packaging

EP5751 is supplied in 5 kg, 25 kg or 200kg containers  
H15 is supplied in 1kg, 5kg and 12.5kg containers.

(Please contact Alchemie Ltd for bulk supply)

## **Further Information**

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using any of our products, users should familiarise themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

## **Alchemie Limited**

Alchemie Ltd develops, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.

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